R22 Regulation *Subject code:4E3AE*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech III Semester Supplementary Examinations, June 2026

BUILDING MATERIALS, CONSTRUCTION& PLANNING

(CE)

Maximum Marks: 60 Date:20.06.2026 Duration: 3 hours

Note: **1.This question paper contains two parts A and B.**
2. Part A is compulsory which carries 10 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10x1M=10 Marks)		Marks	CO	BTL
1a)	What do you mean by stone quarrying?	1M	1	L1
b)	Mention two advantages of fly ash bricks.	1M	1	L1
c)	Name the chemical compounds formed during the setting action of cement?	1M	2	L1
d)	What is the role of silica in cement?	1M	2	L1
e)	What is the purpose of a landing?	1M	3	L1
f)	Mention any two materials used for DPC.	1M	3	L1
g)	State two benefits of adding steel fibers to concrete.	1M	4	L1
h)	Mention any two types of cladding materials.	1M	4	L1
i)	What is orientation? Why is it important in building planning?	1M	5	L1
j)	What is Floor Area Ratio (FAR)?	1M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
2	a) Illustrate with diagram various defects in timber. b) What are the various ingredients of paint? Explain the function of each of them.	5M 5M	1 1	L3 L2
	OR			
3	a) What is seasoning of timber? Explain any two methods of artificial seasoning in detail. b) Explain the classification of stones with neat sketches.	5M 5M	1 1	L2 L2
4	a) What are the reactions of hydration of the main compounds in portland cement. b) Categorize the different types of cement and explain any four in brief.	5M 5M	2 2	L3 L3
	OR			

5	a)Tell the various ingredients required for manufacturing of cement? State their functions and properties of cement. b) List out the laboratory tests on cement and explain any one test.	5M 5M	2 2	L3 L2
6	a) Discuss the characteristics of sound and explain how they affect acoustics in buildings. b) Define a lintel and mention the materials which are commonly used in their construction.	5M 5M	3 3	L2 L2
	OR			
7	a) Describe in detail the internal and external plumbing lines and fittings used for water supply and sanitation. b) How do you select the location of doors and windows.	5M 5M	3 3	L4 L3
8	a) Discuss various types of pointing with neat sketches. b) Describe the various forms of structural steel available with sketches.	5M 5M	4 4	L2 L2
	OR			
9	a) What do you mean by plastering? Discuss its functions and tests. b) What are the requirements of good 'Form work'?	5M 5M	4 4	L2 L2
10	a) Describe the procedure to submit a plan. b) Explain about the merits and demerits of building bye-laws.	5M 5M	5 5	L2 L2
	OR			
11	a) Describe the classification of buildings as per National Building Code (NBC). b) Explain the principles of circulation in building planning.	5M 5M	5 5	L2 L2